



MAP SHOWING GEOLOGIC UNITS DIRECTLY BENEATH MISSISSIPPIAN SYSTEM

SCALE 1:5,000,000

100 0 100 200 300 400 500 MILES

100 0 100 200 300 400 500 KILOMETERS

- LIST OF MAP UNITS**
At atmospheric pressure except those that are indicated
are in contact with the U.S. Geological Survey
- MISSISSIPPIAN AND DEVONIAN ROCKS**
- MD Undivided
 - MDa Arkansas Novaculite
 - MDm Middle division
 - MDc Chattanooga Shale
 - MDw Englewood Formation
 - MDex Eastway Formation
 - MDi Hampshire Formation
 - MDho Hazy Formation
 - MDl Leatham Formation
 - MDlc Lodgepole Limestone, Cottonwood Canyon Member
 - MDmc Madison Limestone, Cottonwood Canyon Member
 - MDna New Albany Shale (or Group)
 - MDo Onondaga Limestone
 - MDp Pilot Shale
 - MDs Sulphur Springs Formation
 - MDn Sappington Member of Three Forks Formation
 - MDw Woodford Shale and equivalents
- UPPER DEVONIAN ROCKS**
- Du Undivided
 - Dal Antenn Shale
 - Dal Arkansas Novaculite, lower division
 - Dbl Broad Ford Sandstone
 - Dbs Bueland Formation
 - Dcl Chagrin Shale
 - Dcl Castile Formation, lower part
 - Dcl Chaffee Formation, Dyer Dolomite Member
 - Dcl Charming Formation—Includes drifts: Big Brown shale
 - Dcl Coudersport Formation
 - Dcl Darby Formation
 - Dcl Dayton Formation
 - Dcl Elberta Formation (part)
 - Dcl Galesburg Formation, lower part
 - Dcl Hazen Formation
 - Dcl Kinderhook shale, lower part
 - Dcl Lorraine Limestone
 - Dcl Koresa Shale
 - Dcl Maple Mill Shale
 - Dcl New Albany Group and Saverton Shale
 - Dcl Ohio Shale
 - Dcl Oswego Formation
 - Dcl Penn Shale
 - Dcl Perth Shale
 - Dcl Plover Peak Limestone
 - Dcl Riceville Shale
 - Dcl Saverton and Grassy Creek Shales
 - Dcl Silica Formation
 - Dcl Starbuck Formation
 - Dcl Sylamore Formation
 - Dcl Temple Butte Limestone
 - Dcl Three Forks Formation
 - Dcl Woodruff Formation
- MIDDLE DEVONIAN ROCKS**
- Dke Kennett Formation
 - Dpg Pegram Limestone
 - Dsl Simonson Dolomite
- UPPER AND MIDDLE DEVONIAN ROCKS**
- Dex Callaway Limestone and Snyder Creek Shale
 - Dex Devils Gate Limestone
 - Dex Guilmette Formation
 - Dex Jefferson Formation
 - Dex Lost Buro Formation
 - Dex Martin Limestone
 - Dex Sauratown Limestone
 - Dex Sauratown and Dawson Bay Formations
 - Dex Sulten Limestone
- LOWER DEVONIAN ROCKS**
- Dwc Water Canyon Dolomite
- MIDDLE AND (OR) LOWER DEVONIAN ROCKS**
- Df Frog Mountain Sandstone
 - Dm Nevada Formation
 - Dpn Penters Chert
- DEVONIAN ROCKS**
- D Devonian rocks
- DEVONIAN(?) ROCKS**
- Dpl Eganite Sand Formation
 - Dpl Peale Formation
 - Dpl Sierra Buttes Formation
- SILURIAN ROCKS**
- S Undivided
 - Sd Decatur Formation
 - Sr Red Mountain Formation
- DEVONIAN AND SILURIAN ROCKS**
- DS Undivided
 - DSH Hutton Group
 - DSrd Ross Limestone and (or) Decatur Formation
- ORDOVICIAN ROCKS**
- O Undivided
 - Ob Bighorn Dolomite
 - Oc Cotter Formation
 - Od Elk River Group
 - Of Fremont Limestone
 - Of Jefferson City Formation
 - Om Menard Dolomite
 - Omq Maquoketa Shale
 - Os Red River Formation
 - Os Simpson Group
 - Os St. Peter Sandstone
 - Os Viola Limestone
 - Os Valley Formation
 - Os Vireo Formation
- SILURIAN AND ORDOVICIAN ROCKS**
- SO Silurian and Ordovician rocks
- CAMBRIAN ROCKS**
- C Undivided
 - Ca Aysa Dolomite
 - Cd Deadwood Formation
 - Ca Gallatin Limestone
 - Ci Lodore Formation
 - Cly Lynch Dolomite
 - Cm Madison Limestone
 - Co Ophiir Shale
 - Ci Sawatch Quartzite
 - Ci Teton Quartzite
- DEVONIAN TO CAMBRIAN ROCKS**
- DSOC Devonian to Cambrian rocks
- SILURIAN TO CAMBRIAN ROCKS**
- SOC Silurian to Cambrian rocks
- ORDOVICIAN AND CAMBRIAN ROCKS**
- OC Ordovician and Cambrian rocks
 - OCa Arbuckle Limestone
- PRECAMBRIAN ROCKS**
- pC Precambrian rocks
- ROCKS UNDERLYING MISSISSIPPIAN SYSTEM—**
System unknown
- LIMIT OF MISSISSIPPIAN SYSTEM**
- CONTROL POINTS**
- Quarry
 - Well
 - Composite section constructed from wells, outcrops, or both, less than 5 miles apart
 - Generalized section constructed from scattered data in the surrounding area
- FAULTS**—Dashed where control is poor; queried where doubtful; dotted where projected into areas where mapped unit has not been penetrated or identified and may or may not be present
- Post Mississippian faults—Only those which are needed to explain distribution of mapped units are shown
- Thrust fault—Sawtooth on upper plate
 - Lateral fault—Arrows show relative movement
 - Normal fault—U, upthrown side; D, downthrown side
 - Mississippian faults—Faults which moved during deposition of the Mississippian System
 - Thrust fault—Sawtooth on upper plate
 - Lateral fault—Arrows show relative movement
 - Normal fault—U, upthrown side; D, downthrown side
- PATTERNED AREAS**
- Area in vicinity of Mississippian rocks where older rocks are exposed
 - Area in vicinity of Mississippian rocks in which the Mississippian, if ever present, has been masked or destroyed by younger igneous intrusions, by metamorphism, or complex structural deformation
 - Area in vicinity of Mississippian rocks in which Mississippian rocks have not been penetrated by drill and may or may not be present
 - Ouachita tectonic belt—Northern edge of shaded band indicates edge of tectonic belt, southern limits undetermined
 - Cave deposits